



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029**

November 10, 2008

Ms. Susan McDonald
Harrisburg Airports District Office
Federal Aviation Administration
3905 Hartzdale Avenue, Suite 508
Camphill, PA 17011

RE: Philadelphia International Airport Capacity Enhancement Program Draft Environmental Impact Statement, September 2008 CEQ # 20080374

Dear Ms. McDonald:

In accordance with the National Environmental Policy Act (NEPA) of 1969 and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) offers the following comments regarding the Philadelphia International Airport Capacity Enhancement Program Draft Environmental Impact Statement (DEIS).

The Capacity Enhancement Program was selected in October 2002 by the U.S. Secretary of Transportation as one of 13 high-priority projects nationwide that are subject to Presidential Executive Order (E.O.) 13274, Environmental Stewardship and Transportation Infrastructure Project Review. This E. O. calls for "The development and implementation of transportation infrastructure projects in an efficient and environmentally sound manner. Executive departments and agencies (agencies) shall take appropriate actions, to the extent consistent with applicable law and available resources, to promote environmental stewardship in the Nation's transportation system and expedite environmental reviews of high-priority transportation infrastructure projects." EPA has been participating in this process by reviewing various draft technical documents and providing comments that were to be addressed in this document. We continue to suggest that the stewardship proposals be included as part of this DEIS.

The Capacity Enhancement Program (CEP) DEIS examined two build alternatives and a No Action Alternative. Alternative A (Parallel Runway 8-26 East), would have five runways connected by a redesigned and more efficient taxiway system. Alternative B (Parallel Runway 8-26 West), would have four new runways connected by a redesigned and more efficient taxiway system. The DEIS did not identify a preferred alternative

Project Purpose and Need:

According to the DEIS, the CEP is needed because PHL is currently one of the most delay-prone airports in the National Airspace System (NAS), and delays are predicted to worsen in the future as aviation demand increases. Currently PHL suffers its most severe delays during poor weather with low visibility, as a result of the configuration of the existing airfield. Delays also occur at peak travel hours of the day, peak days of the week, and during heavy travel periods when scheduled aircraft operations exceed PHL's total capacity even in good weather. The CEP is also needed because delays impose substantial cost in time and money for passengers and airlines, cargo shippers, and other users of the air transportation system, as these delays spread

throughout the NAS.

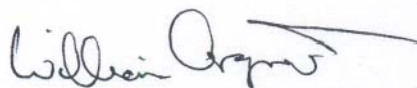
In 2007 FAA documented that PHL was the sixth most congested airport in the country with 23,955 flights delayed by 15 minutes or more. FAA has listed PHL as one of eight “pacing” airports in the country that contribute to delays throughout the NAS. To address some of the delays in the short term, Runway 17-35 is currently being extended and is scheduled for completion in 2009. When completed, this runway will be able to accommodate most regional jets and narrow body jets.

This DEIS considers the New York/ New Jersey/ Philadelphia Metropolitan Airspace Redesign Project (ARD). The purpose and need for the ARD is to increase the efficiency and reliability of the airspace structure. It is not a capacity enhancing project. The airspace configuration under the ARD was incorporated into the operational modeling of future conditions at PHL for the years 2015 and later, when ARD will be fully implemented. According to the DEIS, even with the ARD, delays at PHL are expected to worsen, reaching nearly 20 minutes of annualized average delay per aircraft operation by 2017.

We commend Federal Aviation Administration (FAA) in taking the time to consider the airspace redesign project in the development of this project however this DEIS does not contain adequate information to fully assess the environmental impacts the build alternatives or evaluate potential mitigation options. We are especially concerned with impacts to air quality and the community, and impacts to river and wetland habitats. Based on our review, EPA has rated the environmental impacts of both build alternatives in the DEIS as EC (Environmental Concerns) and the adequacy of the impact statement as 2 (Insufficient Information). A copy of EPA’s rating system is enclosed for your reference. The basis for this rating is contained in the detailed comments that are an attachment of this letter.

Thank you for providing EPA with the opportunity to review this project. If you need assistance in the future, please contact Barbara Okorn who can be reached at (215)814-3330.

Sincerely,



William Arguto
NEPA Team Leader
Office of Environmental Programs



Background:

The DEIS screens a range of alternatives including Off-Airport, non-construction, and on-airport alternatives. This process developed three preliminary Alternatives A (Parallel Runway 8-26 East), B (Parallel Runway 8-26 West), and C (Midfield Terminal). The DEIS evaluates Alternatives A, B, and a No-Action alternative. Alternative C, the Midfield Alternative, was considered not reasonable in terms of implementation issues, operational delay during construction, and project cost.

Alternative A would have five runways connected by a redesigned and more efficient taxiway system than the No-Action Alternative, and would cost and estimated \$5.2 billion to construct. A new runway (Runway 9L-27R) would extend into the Delaware River. Associated actions include relocating the UPS facility, relocating the freight rail line, and relocating part of the USACE Dredge Disposal Facility. Under Alternative A, annualized average delay in 2025 is estimated at 8.4 minutes per operation. The delay with Alternative A is less (by 10.7 minutes per operation, on average) than the No-Action Alternative, but greater than Alternative B. Other impacts associated with this alternative include: noise, displacement of 80 businesses and 72 homes, loss of 81.7 acres of wetlands (46.7 acres of these are the Philadelphia Water Department Sludge Lagoons and 15.6 acres are tidal wetlands), 22,294 linear feet of waterways, 2.1 acres of open water, 347 acres in the 100-year floodplain, 534 acres of upland grassland, 68.6 acres of upland woodlands, and Threatened and Endangered Species habitat, and air quality,. This alternative would also impact the Enterprise Avenue Superfund Site since the landfill cap is inadequate to accommodate the soil loads that would result from raising Runway 8-26 by 55 feet.

Alternative B would have four new runways connected by a redesigned and more efficient taxiway system, and would cost and estimated \$5.4 billion to construct. A new runway (Runway 9L-27R) would extend into the Delaware River. Associated actions include relocating the UPS facility, relocating the freight rail line. Under alternative B, annualized average delay in 2025 is estimated at 7.1 minutes per operation. Other impacts associated with this alternative include: noise, displacement of 78 businesses and 72 homes, loss of 50.7 acres of wetlands (16.9 acres tidal), 33,016 linear feet of waterways, 2.9 acres of open water, 761 acres of 100-year floodplain, 918.3 acres of upland grassland, 73.4 acres of upland woodlands, and Threatened and Endangered species habitat, and air quality. This alternative would also impact the Enterprise Avenue Superfund Site since the landfill cap is inadequate to accommodate the soil loads that would result from raising Runway 8-26 up to four feet.

The EIS also discloses that approximately 330 housing units (population of 832) for Alternative A or 290 housing units (population of 745) for Alternative B will be significantly impacted (DNL 1.5 dB or more) in 2020. EPA is concerned that at this draft stage noise mitigation is only considered and delays until the final EIS the disclosure of what, if any, noise mitigation will be required. EPA requests that the final EIS contain a commitment to mitigate by 2020 the 330 housing units in Alternative A or the 290 housing units in Alternative B that will be significantly impacted



General Comments

EPA encourages the project team to continue to work with state and federal agencies to avoid and minimize impacts and to develop mitigation packages to address all impacts. The FEIS should also address the stewardship projects associated with the PHL project since Stewardship is part of the Executive Order. The build alternatives should also include low impact development designs and should be documented in the FEIS. The Record of Decision should document mitigation measures for environmental and community impacts. Given the ecologically sensitive area, an environmental monitor should be involved in later stages of the development to ensure that environmental impacts are avoided, minimized and relocations of species are done correctly. Adaptive Management strategies should also be employed for this project.

Detail Comments

- Page 2-11 discusses historic and Existing Operations at PHL, including the impact of September 11, 2001, 2002 economic recession, etc. This section should also discuss the current economic situation.
- Page 2-16, Table 2-9 has data up to 2003 from a 2005 source. Page 2-21 also refers to conditions in 2003. The most recent data should be used in all aspects of the EIS.
- Page 3-5 states that “PNE has two intersecting runways which are not adequate to accommodate and additional 116, 900 aircraft...” It is unclear what the 116, 900 represents.
- Limited information is provided regarding logistics and impacts for some aspects of the alternatives. For example, Chapter 3 Alternatives, page 3-40 states that approximately 10 million cubic yards of fill would be placed for the Runway 8-26 embankments. What is the source of the fill? How will it be brought to the airport, etc?
- This page also gives a cost estimate for Alternative A, but it does not consider mitigation for environmental impacts and land acquisition. The costs estimates should consider all costs associated with the alternatives including mitigation, acquisition, and any costs associated with other properties (i.e. Enterprise Avenue Superfund site issues, COE Disposal property, relocating UPS, road relocations, etc.) to the extent possible to present the information to be evaluated. It appears that the Alternatives, especially Alternative A may involve other costly projects.
- All impacted features should be clearly shown on the figures with the Alternatives. This includes Enterprise Avenue Superfund Site and roadways.
- Page 3-53 states that the fill in the Delaware River considers and evaluates several construction options, including a solid fill structure and five different pile supported structures. More detail should be included in the EIS. If it is in another section of the document, it should be referenced.
- Pages 3-54 and 3-61 state that lights will be in the Delaware River 1,700 feet from the fill limit. Impacts associated with this activity should be clearly explained for both alternatives.
- Page 3-57 discusses construction phasing and states that construction will take place over 13 calendar years. The period is assumed to be late 2008 to early 2020. This should be corrected since the project will not start in 2008.



- An evaluation of environmental impacts associated with the USACE disposal site, UPS relocation, 60th Street Industrial Track, Enterprise Avenue Site, road relocations, etc should be included in the EIS.
- Chapter 4, should clearly state how the jurisdictional and non-jurisdictional determinations were made and the agencies involved. Dates and documentation should be referenced.
- Page 5-136 states that “Alternatives A and B would require filling two acres of the Delaware River for the new Runway 9R-27L. The new runway end would create a scour hole predicted to be 1.5 feet deep and to extend over approximately 5 acres for the pile support deck, and to be approximately 13 feet deep and extend over approximately 10 acres for the solid fill structure. Deposition of sediment could expand the size of intertidal mudflats and increase the available habitat for intertidal wetland communities in the Project Area by approximately 23 acres. According to the hydrodynamic analysis, there would be no impact to Little Tinicum Island wetlands or to riverine communities downriver from the proposed fill. More information should be included about these impacts and how they relate to the Delaware River. Monitoring should also be included to ensure these areas are not adversely impacted and strategies should be developed if a problem is encountered.
- The document should discuss the freshwater tidal wetlands in more detail and their significance in the area. The DEIS states that there were once over 5, 700 acres of these wetlands in the Philadelphia area now only 200 acres remain undisturbed. The project could impact 15+ acres.
- Page 5-138 of the DEIS states that impacts from the loss of wetlands would be minor considering the small size, location within the Airport, and degraded condition of wetlands and waterways in the Project Area. Alternative A would result in the loss of 23% of Section 404 Jurisdictional wetlands and Alternative B 33% within the project area. These wetlands and waterways are functioning and providing habitat to state listed species. Page 5-140 states that “construction of Alternatives A or B would not have significant impact on wetlands and waterways in the project or Local Study Area as defined by FAA Order 1050.1E. Such statements about minor impacts are misleading given the urban setting of the project area and the habitat these areas provide.
- Page 5-153 discusses using coffer dams in the Delaware River for construction. More details are needed to evaluate the impacts from these activities.
- Page 5-165 presents wetland totals that are slightly different than those presented in other sections of the report. Impact numbers should be clearly presented.
- Page 5-167 a table showing impacts to listed species by alternative would be helpful.
- This project should comply with Executive Order 13112 regarding invasive species.

Environmental Justice

EPA continues to be concerned by the separation of Hispanic populations from the assessment of minority populations in this document. Executive Order 12898 that establishes the background for addressing Environmental Justice clearly refers to minority populations and low-income populations, making no distinction between Hispanic populations and other minority populations. The Environmental Justice community in this country has and continues to include Hispanic Populations as minority populations. This comment was forwarded during the preliminary review but has not been addressed. This methodology is in conflict with the intent of the Executive Order and dilutes the concentrations of minority populations in the study area. The Executive Order actually uses the language minority populations and/or low-income populations,



which indicates that either minority and/or low-income populations are Environmental Justice Communities of concern. Therefore, assessments conducted need to look at both minority and low-income populations jointly and separately. Adverse impacts for a given project may occur in an area where there are both minority and low-income populations, or they may occur in either a minority or low-income population area disproportionately. If either is the case, there is a problem with respect to Environmental Justice. The goal of the Environmental Justice Assessment is to conduct a careful, objective analysis to assure that these communities are not disproportionately impacted by work conducted for a given project. Many times there are patterns of displacements, cumulative impacts or significant activities related to the project that have an adverse effect upon these populations. It is the responsibility of the personnel responsible for the project to address these and other challenges as related to the project.

Page A-1 of FAA Order 1050.1E uses the following language to define the populations outlined in the Executive Order, “Since environmental justice is defined as any disproportionately high and adverse impact on minority populations and low-income populations, this E.O. applies to other impact categories where appropriate.” Please also refer to FAA Order 1050.1E Appendix A, section 16.1 and 16.2.

These sections do not address Hispanic populations separately. Hispanic populations are minority populations and should be treated as such in any assessment, decision making, or application of policy. All minority populations should be combined in the assessment and treated together. In addition, there should be an attempt made to identify and define areas where the minority and/or low-income populations are disproportionately impacted. In fact, the word Hispanic does not appear in the FAA document. Therefore, the word Hispanic should be removed from section 4.5 in the discussions of environmental justice populations.

1. The document is not very clear when identifying areas where there may be multiple impacts, adverse impacts, or disproportionate impacts upon communities of concern. Maps and tables are confusing and are difficult to interpret. Clear charts, maps and tables are needed to show the points of disproportionate impacts, as well as points where a given population is receiving multiple impacts
2. There is concern regarding the choices of print media outlets used to provide information to the public. It is noted that a wide variety of print media publications were used including Spanish language newspapers, however no publications published by or for African Americans was included. It is troubling that the rationale used for selecting the Philadelphia Daily News as the target for the African American population because about 50 percent of its readership is African American. It is interesting to note that the Philadelphia Tribune, a local newspaper printed for the African American community, that has been repeatedly recognized as the best African American newspaper the country, was not included as one of the print media sources and may be a more appropriate publication to reach the African American community.
3. It appears that many outreach opportunities to minority communities were missed. Churches and civic organizations serving the minority community could have also been used as outlets for reaching out to the community to provide information. In addition, minority media outlets such as television and radio stations may have been useful in getting out information regarding meeting dates and locations, as well as to provide forums for discussing issues and concerns.
4. The document is not very clear when identifying areas where there may be multiple impacts, adverse impacts, or disproportionate impacts upon communities of concern.



Maps and tables are confusing and are difficult to interpret. Clear charts, maps and tables are needed to show the points of disproportionate impacts, as well as points where a given population is receiving multiple impacts.

Sole Source Aquifer

Executive Summary

1. Section S.8.2 refers to Figure S-7. This figure does not seem to be included with the report. Please forward this figure.
2. Section S.8.8 draws the conclusion that there will be no adverse impact to the Sole Source Aquifer due to the “low recharge” of the “relatively impervious fill.” Trenton Gravel, which underlies a portion of the site, has a high porosity and permeability. What is the existing rate of recharge of the soil compared to the rate of recharge of the fill?

Chapter 5 Environmental Consequences

1. Section 5.11.3 states that both alternatives will require relocation of a fuel farm and fuel island. We agree that new pipelines should be double walled and graded toward containment pads.
2. Section 5.11.3 refers to a leak detection and repair plan for the hydrant-based fueling system. A leak detection plan that contains a visual inspection alone is not sufficient. Leak detection should be computer-assisted using leak detection equipment, a sonic leak detection survey or another acceptable method for detecting leaks along distribution mains, valves, services and meters.
3. Please provide more information regarding the drainage system for the deicing pads.
4. It appears that Alternative B would be the preferred alternative to enhance groundwater protection, as it yields a reduction in impervious coverage as compared to the present state. This creates more aquifer recharge, which helps to prevent brine intrusion, and creates less polluted runoff.
5. What modeling method is employed to support the claim in Section 5.11.4 that the landfill will change the direction of groundwater flow? What is the new anticipated flow pattern?
6. We would like additional information on the aquifer dewatering project mentioned in Section 5.11.5 before it begins.

Chapter 6 Mitigation

1. Vegetated swales and buffers should be used to reduce infiltration of metals, nutrients and glycol. This is of particular benefit as an “increase in runway deicing...could increase the amount of glycol reaching the groundwater through any pervious or vegetated surfaces adjacent to the runways” (Section 5.11.3 *Groundwater Impacts*).

Miscellaneous Comments

1. Existing wells that will no longer be operational and that would be impacted as part of the proposed construction should be properly abandoned and sealed to prevent contamination to the groundwater.
2. Care should be taken during construction within the Enterprise Avenue Landfill area to prevent infiltration of water into the landfill and migration of contaminated groundwater outside of the extraction area for the remediation system. Construction in this area necessitating the temporary shut-down of the pump and treat remediation system, creating a period of time in which the release would not be actively remediated or hydraulically controlled, should be kept to a minimum.



3. Alternative A includes acquiring a portion of the USACOE Fort Mifflin Confined Disposal Facility (Cell C). This portion of the facility would be relocated to former sludge impoundments northeast of the project area. The final design will determine if sludge materials are removed or if they are to be left in place. If sludge materials and/or contaminated soils are left in place, the cell(s) should be lined with impervious materials to prevent infiltration to groundwater from the dredge sediment and impoundment sludge. Infiltration could potentially cause contamination to the underlying Sole Source Aquifer and/or cause the migration of the groundwater plume associated with the Enterprise Avenue Landfill outside of the containment area.

Hazardous Waste

The plan to reconfigure the Philadelphia International Airport will need to ensure the continued protection of the Enterprise Avenue Landfill and the groundwater monitoring and treatment system. The Enterprise Avenue Landfill lies underneath Runway 8-26. Under Alternative A and B additional capping would be laid over the landfill and the runway would be extended either to the east or to the west. Alternative A involves adding 55 feet of soil fill and extending the runway 2,000 feet to the east and Alternative B involves adding four feet of soil fill and extending the runway 2,000 feet to the west.

Any plan to reconfigure the Philadelphia International Airport will need to fully evaluate the potential impact to the landfill cover, the groundwater contamination, and groundwater monitoring and treatment system. Potential impacts identified will need to be addressed and mitigated in coordination and approval by EPA. A series of groundwater extraction and monitoring wells encircle the landfill to extract and monitor the groundwater quality. The groundwater wells extract the contaminated groundwater and send it to the Philadelphia sewage treatment plant.

The City of Philadelphia and EPA have an enforcement agreement, Administrative Order on Consent (Docket No. III-2001-0007-DC) that requires the City to treat and monitor the groundwater contaminants in accordance with the Response Action Plan dated August 2003. Compliance with the AOC and Response Plan is critical. Any potential future revision to the landfill cover and groundwater system will require consultation with EPA and renegotiation of the AOC and Response Plan.

EPA recommends that a groundwater monitoring plan be developed that would have a baseline of groundwater data prior to construction; that would describe what groundwater wells, if any, would be monitored during construction; how the groundwater remediation would be maintained throughout construction; and then after completion of the expansion what groundwater wells would make-up the next monitoring program and what type of groundwater remedy would be implemented.

Chapter 5 of the Draft Environmental Impact Statement (DEIS) provides only general information about the Enterprise Avenue Landfill and the impacts of the reconfiguration to the current remedy. It is not clear from the DEIS what will happen to the Enterprise Avenue Landfill site remedy. For example, pages 5-198 and 5-199 state, "The current remediation would also need to be modified or replaced to accommodate the added height of the ground surface." There is no information on the modification or replacement of the current remedy.



A well network monitors the contaminants in the groundwater at the Enterprise Avenue Landfill site and a series of wells extract the contaminated groundwater and send it to the local sewage treatment plant. Page 5-199 states, “Alternatives A and B would also require the treatment system to be shut down temporarily, creating a period of time (potentially several years) in which the release would not be actively remediated or hydraulically controlled.” Again, there is no information on how the shut down would be performed or what would happen when the shut down period was completed.

Air Quality:

All previous conformity comments provided on the Agency draft air quality reports need to be addressed.

Comments on Air Quality Modeling:

1. The Air Quality Technical Report dated September 1, 2008 is essentially unchanged from the July report and therefore, as stated before this work does not contain enough detailed information to provide a thorough review. Only a brief narrative was provided that describes the analysis in general terms, followed by a summary of the consolidated results. None of the model input or output information have been provided. Detailed information is needed to independently replicate the results presented in the DEIS. Additionally, it would be useful if a breakdown of individual source contributions to receptor concentrations were also provided.
2. Based on previous discussions and agreements with FAA the DEIS was to evaluate the No Action and the Preferred Alternative using the most recent 5 years of meteorological data . Since there is no Preferred Alternative identified in the DEIS, the modeling results, presented in the Draft EIS, for all Alternatives, should be based on the most recent 5 years of representative meteorological data.
3. The DEIS does not model air toxics (HAPS) emissions for the CEP. EPA continues to recommend that an air toxics modeling analysis be performed. In 1996 and again in 1999 EPA conducted nation-wide analyses (National Air Toxics Assessments or NATA¹) of the impacts from the emissions of 33 and 177 air toxics, respectively. These analyses included air toxic emissions from all airports within the United States. The purposes of these studies were to provide a basic indication of where potential problems might exist, and to encourage more comprehensive local-scale analyses of the higher impacted areas, of which Philadelphia was one. NATA has been peer reviewed by both the EPA Science Advisory Board (SAB) and The National Academy of Sciences (NAS). The SAB “... was generally very supportive of the assessment purpose, methods, and presentation – the committee considers this an important step toward a better understanding of air toxics²,” and the NAS “...indicated that NATA has provided a tool for exploring control priorities and has served as a preliminary attempt to establish a baseline for tracking progress in reducing HAP emissions³.” Based on the cautions expressed in the NATA report regarding the use of the national results on the local scale, Region 3 performed an internal analysis of the NATA study results for the Philadelphia area. This analysis included a complete re-modeling of the area using a traffic

¹ <http://www.epa.gov/ttn/atw/natamain/index.html>

² <http://www.epa.gov/ttn/atw/nata/peer.html>

³ <http://www.epa.gov/ttn/atw/natamain/index.html>



demand; link based mobile source inventory as well as photochemical models to estimate the secondary component of certain air toxics. One of the major findings was that the Philadelphia airport was one of the most significant source groups in the study area. Since both the SAB and the NAS believe that the NATA work is a useful exercise and since Region 3's local scale analysis represents a significant improvement over NATA, it's difficult to understand FAA's reluctance to perform the requested analysis. The use of FAA's emissions estimates would further improve the analysis performed by Region 3. The emissions used in both the NATA and Region 3 analyses, for the Philadelphia Airport, came directly from the national NEI emissions inventory. Given the scale of this inventory it subject to certain simplifying assumptions which may not best represent the actual emissions at the Philadelphia airport.

The issue of modeling air toxics was discussed with FAA during a meeting held at the Region 3 offices on 9/28/05. Although FAA declined to model air toxics for the CEP (FAA reasoned that air toxics modeling had not been done for any previous EIS and would require a change in their national guidance), they did agree to provide us with their air toxics emissions estimates as soon as they were available. This was requested so that we would have the opportunity, if necessary, to revise our previous analysis, if that were found necessary and if resources would allow. The HAPS emission estimates, made by FAA, were never sent to this office. Furthermore, FAA indicated that they would weight the air toxics emissions by toxicity for presentation in the EIS (this had been done for the O'Hare airport EIS). However, on page A-33 of the Air Quality Technical Report (supporting justification for the DEIS), FAA's states that, "... In accordance with FAA guidance, the air toxics assessment will not include toxicity weighting ..." The decision to present unweighted air toxics emissions is unclear.

4. The stationary sources that were modeled included 13 boiler stacks on the airport property. The median stack height was identified as 14.32 m. Given the short stacks and the fact that some of them are located in buildings, it would be expect that the modeling would have considered building downwash effects. However, the report is silent on this matter. Building dimensions and locations relative to the stacks should have been provided in the Draft EIS so that the need to consider building downwash could have been evaluated.
5. Based on discussions that occurred during the 9/28/05 meeting, FAA agreed to increase the number of receptors modeled from their original set of discrete receptors to include additional gridded sets of receptors. It was our understanding that the location, extent and resolution of these additional gridded receptor networks would be defined after examining preliminary modeling results. The gridded receptors are needed to insure that the concentration gradients in the neighborhood of the high predicted concentrations are resolved. On page A-24 (Appendix A – Final Air Quality Analysis Protocol) Section 4.1.3 discusses the methodology used to select receptors. This section states that in addition to the discrete receptors, gridded receptor networks will be used "... in order to assure that the locations of maximum concentrations have been identified." However, the Air Quality Technical Report presents modeling results for the discrete receptors only. There is no mention of using gridded receptors to insure that maximum concentrations would be identified.
6. The analysis preformed for the impacts on air quality during construction was limited to an estimate of the emissions that would result during the 12 year construction period. Next to



aircraft, construction emissions of NO_x, VOC, SO₂, & PM_{2.5} are considerably higher than any other source group. On page 5-5 of the Air Quality Technical Report it is stated that, "... Construction activities may result in short-term impacts on air quality." Although this is generally true, the construction period for this project is 12 years. This is more than double the length of meteorological record that EPA requires for regulatory modeling analyses; a period of 5 years is considered adequate for establishing temporal variability in air pollutant concentrations due to meteorology. Therefore, it is reasonable to expect long-term impacts from construction activities will also be important. Given the significance of the construction emissions and the long period of construction, these emissions should be modeled along with the other sources.

7. The regional study area, as defined in the DEIS, does not appear to extend far enough in order to capture all of the increased mobile emissions that will result from this project. It does not seem reasonable to assume, that traffic volume will increase only within the report's defined regional study area. The expected, more wide-spread, increase in mobile emissions should have been estimated and included in the modeling analysis.
8. The modeling results for PM_{2.5} show violations of both the 24hr and annual standards. This is not surprising since that area has been designated non-attainment for PM_{2.5}. However, the methodology used to estimate the maximum PM_{2.5} concentrations does not follow proper guidance for modeling impact on the National Ambient Quality Standards. The proper guidance can be found in the Guideline on Air Quality Models⁴ (GAQM). In addition to modeling the sources under consideration (in this case the sources within the study area) and adding a reasonable estimate of regional background, Section 8.2.3b. of the GAQM states that, "All sources expected to cause a significant concentration gradient in the vicinity of the source or sources under consideration ... should be explicitly modeled." These sources are termed "near-by sources." The procedure followed for the airport project did not include the explicit modeling of near-by sources. Only sources within the study area were modeled to which was added a conservative estimate of background (the highest monitored concentration within the most recent three years). Within close proximity of the airport there are a large number of stationary sources that would certainly be expected to fall into the near-by source category. For example, the Eddystone Generation Station (a base load coal fired power plant) and at least 4 oil refineries are within 5km of the airport. The impact within the study area from these facilities and others in the area can not be adequately represented by the monitoring data.

On page 2-4 of the Air Quality Technical Report the authors conclude that, "This [*meaning the methodology they are using for estimating impact on standards*] generally results in a conservative estimate of pollutant concentrations in the study area." Based on the above discussion, this statement is not supportable.

On-Road Mobile Emissions Comments

- We commented on the draft Air Quality Technical report that DVRPC's 2005 data should be considered in the modeling effort discussed in Appendix A (pg A-17 – Table 1) Appendix A, Page A-17, Table 1, VMT mix, Registration distribution, Diesel sales fractions. The response to our comment was that the information presented in Appendix A is reproduced from the Air Quality Assessment Protocol which was prepared before

⁴ 40 CFR Part 51 Vol. 70, No. 216 pp. 68218-68261 Nov. 9, 2005



the PHL CEP air quality assessment was conducted and that these data have since been updated where appropriate. We need to see where and how this information was incorporated into the analysis.

- As previously commented on Appendix E, there is no discussion in this appendix of what background concentrations were utilized in the intersection specific carbon monoxide analysis. This must be included. In addition the region is in non-attainment for the PM2.5 annual standard, under the EPA Transportation Conformity rule, a PM2.5 hotspot analysis of any potentially impacted intersection outside of the airport boundaries must be undertaken to determine if the resulting increased traffic as a result of the airport expansion could be of air quality concern for PM2.5. The response stated that background CO values used in the intersection analyses are the same values used for the EDMS analysis. Under the Transportation Conformity Rule, the assessment of surface traffic emissions on PM2.5 levels is typically accomplished for the entire regional roadway network. In this way, the combined effects of all roadway traffic (included airport-related traffic) are evaluated as a whole. However, in this case, the potential effects of surface traffic operating on the off-site roadways were also included as part of the dispersion analysis and reported upon in the Draft EIS air quality assessment. The document still needs to indicate the background concentration used in the CO hot spot analysis for specific intersections and not just reference that it appears in another part of the report. The second part of the response is inadequate. An analysis for potential PM2.5 hot spot impacts for each potentially affected interchange must be conducted as was done for CO. A regional analysis for PM2.5 is not acceptable for eliminating potential interchange specific impacts for PM2.5.

Noise:

EPA recommends that colors be used in figures 5.2-10, 5.2-11, 5.2-17 and 5.2-18 that indicate those areas that will be newly exposed to DNL 65 dB and those areas that were previously exposed to DNL 65 dB and will no longer be exposed to those levels.

EPA does not believe that housing that currently is exposed to DNL 65 dB but will be exposed to a significant increase (DNL 1.5 dB) should be mitigated only via the Residential Sound Insulation Program (see Table 6.2-1, page 6-3). Mitigation of significant noise exposures caused by the proposed action needs to be part of the cost of the proposed action and should not be left to some other process, such as a future Part 150 process that may or may not provide mitigation for those housing units.

